CUDDY& FEDER

445 Hamilton Avenue, 14th Floor White Plains, New York 10601 Tel 914.761.1300 Fax 914.761.5372 www.cuddyfeder.com

April 21, 2015

BY EMAIL & OVERNIGHT DELIVERY

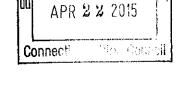
Hon. Robert Stein, Chairman and Members of the Connecticut Siting Council 10 Franklin Square New Britain, Connecticut 06051



Petition No. 1106 - New Cingular Wireless PCS LLP ("AT&T")

Generator Relocation

168 Center Street, Southington, Connecticut



Dear Chairman Stein and Members of the Connecticut Siting Council:

On behalf of New Cingular Wireless PCS, LLP ("AT&T") we are writing to request administrative approval of a revised site plan for the Facility as approved by the Siting Council in Petition 1106.

On October 16, 2014, the Council ruled that a rooftop tower Facility and associated equipment would not have a substantial adverse environmental effect. See ruling dated October 17, 2014 annexed hereto as Exhibit 1. The project at that time included the installation of an emergency backup generator within the basement of the existing building. AT&T is seeking to relocate the generator to an outdoor location between the commercial property's trash compactor and a loading dock. In further support of this request, enclosed as Exhibit 2, please find sixteen (16) sets of 11"x 17" construction drawings last revised April 2, 2015 setting forth the details of relocating the emergency backup generator outside. No other changes to the approved project are proposed.

We understand that the reason for the change in generator location is at the recommendation of the Town of Southington building department as part of AT&T's application for a building permit. The Town has published generator safety guidelines so as to avoid potential accumulation of carbon monoxide indoors. In consultation with the generator manufacturer, they too suggested that the generator be installed outdoors. As such, AT&T is proposing this minor change to relocate the emergency backup generator on the site, which is commercial.



We respectfully request on AT&T's behalf that the generator location change be approved by the Council or its staff administratively. Thank you in advance for your consideration of the enclosed.

Very truly yours,

Christopher B. Fisher

Enclosures

Cc: Garry Brumback, Southington Town Manager

Robert Phillips, Southington Town Planner

Jessica Rincon, AT&T Adam Braillard, Smartlink

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STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051 Phone: (860) 827-2935 Fax: (860) 827-2950 E-Mail: siting.council@ct.gov www.ct.gov/csc

CERTIFIED MAIL RETURN RECEIPT REQUESTED

October 17, 2014

Christopher B. Fisher, Esq. Cuddy & Feder LLP 445 Hamilton Avenue, 14th floor White Plains, NY 10601

RE: **PETITION NO. 1106** - New Cingular Wireless PCS, LLC petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required to install a rooftop telecommunications tower on an existing commercial building located at 168 Center Street, Southington, Connecticut.

Dear Attorney Fisher:

At a public meeting held on October 16, 2014, the Connecticut Siting Council (Council) considered and ruled that the above-referenced proposal would not have a substantial adverse environmental effect, and pursuant to Connecticut General Statutes § 16-50k, would not require a Certificate of Environmental Compatibility and Public Need with the following conditions:

- Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by the Petitioner shall be removed within 60 days of the date the antenna ceased to function;
- If the facility ceases to provide wireless services for a period of one year the Petitioner shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council within 90 days from the one year period of cessation of service. The Petitioner may submit a written request to the Council for an extension of the 90 day period not later than 60 days prior to the expiration of the 90 day period; and
- This Declaratory Ruling may be transferred or partially transferred, provided both the facility owner/operator/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. The Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the facility within 30 days of the sale and/or transfer. Both the facility owner/operator/transferor and the transferee shall provide the Council with a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility.



This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition dated June 2, 2014 and additional information dated October 7, 2014.

Enclosed for your information is a copy of the staff report on this project.

Very truly yours,

Robert Sturus

Robert Stein Chairman

RS/CDM/lm

Enclosure: Staff Report

c: The Honorable Michael Riccio, Chairman, Town of Southington Garry Brumback, Town Manager, Town of Southington Robert Phillips, Town Planner, Town of Southington

Petition No. 1106 AT&T Southington, Connecticut Staff Report

On June 3, 2014, the Connecticut Siting Council (Council) received a petition from New Cingular Wireless PCS, LLC (AT&T) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the installation of a rooftop wireless telecommunications tower on an existing building located at 168 Center Street in Southington, Connecticut. Council member Phil Ashton and staff member David Martin visited the site on July 1, 2014 to review the proposal. Christopher Fisher of Cuddy & Feder, Adam Braillard of SmartLink, Luke Calvin, Marc Chretien of Advanced Engineering Group, and Dan Goulet of C Squared Systems represented AT&T. The Southington town planner, Rob Phillips, represented the town at the field review.

The building at 168 Center Street is an old brick factory complex comprised of several different sections of varying heights and sizes. Much of the complex is occupied by commercial tenants. Currently Verizon has antennas installed on the roof near the front of one of the sections. The section of the old factory on which Verizon has its antennas did not have any tenants at the time of the Council's field review. AT&T proposes to install a 31-foot guyed tower on the roof of the same building, approximately 60 feet to the south of the Verizon installation. AT&T would install 12 antennas and 27 remote radio heads in a three-sector configuration on the tower at a centerline height of 69 feet above ground level. AT&T's ground equipment would be located in an equipment room to be created in the building's basement. The room would also contain a natural gas-fueled generator for backup power. The generator would be vented to the outside of the building.

AT&T's representatives explained that AT&T needed the additional height afforded by the tower so that its antennas would be able to "shoot above" Verizon's antennas, thereby avoiding interference problems. AT&T's plans indicate that the antennas of both companies will be oriented toward the same azimuths. During the field review, Council member Ashton explored the feasibilities of different alternatives to the guyed tower that would be less visible. Part of the impetus for his exploration was the concern expressed by the town planner about the visual impact on nearby residences. AT&T's representatives have responded by saying they will be looking at different alternatives (See Report Update on next page).

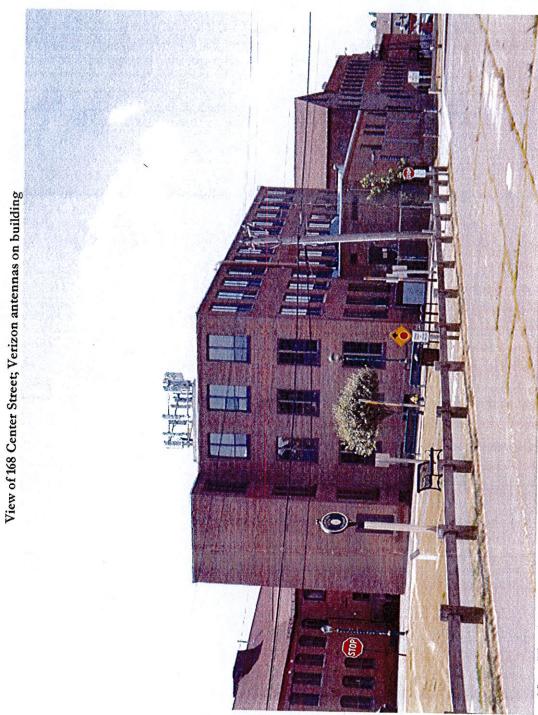
The factory complex at 168 Center Street is at the western edge of Southington's central business district, which has been experiencing a steady revitalization during the past several years. Most of the nearest buildings to the east are commercial, although a new townhouse development is slated to be built near the factory. The area to the west is predominantly residential although there are businesses and old factory buildings on the nearest streets. A north-south rail trail passes right next to the building.

The tower's guy wires would be tied into the walls of the factory building. Instead of a P.E.'s structural analysis of the building, the Council received an affidavit that states the tower and the attachments to the building will be designed in compliance with the relevant codes. This is not, in the staff's opinion, the same as a stamped structural analysis (See Report Update on next page).

C Squared's RF engineers calculated that the combined power density of Verizon's existing antennas and AT&T's proposed antennas would be approximately 44.66% of the FCC's maximum permissible exposure at six feet above ground level (as an average height of a person). This calculation includes a 10 dB off-beam pattern loss adjustment.

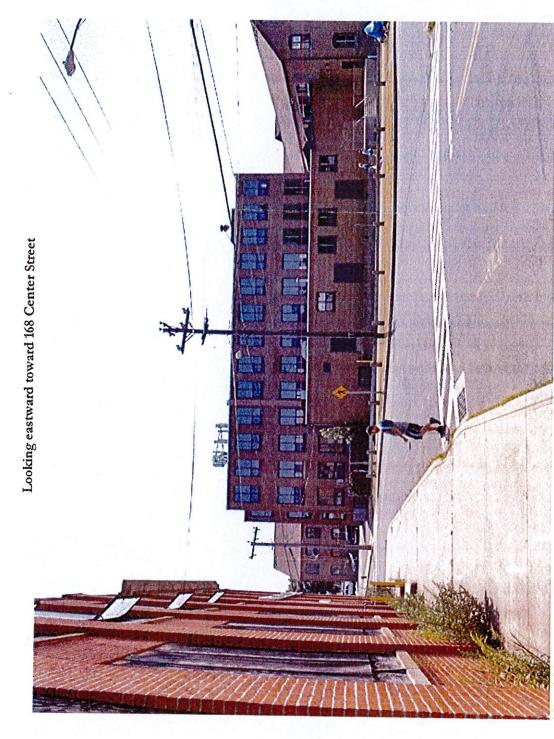
The visibility of the proposed tower would be limited to the immediate vicinity due to its relatively low height and the presence of mature trees in the surrounding area.

Report Update: In response to concerns raised by Council representatives during the field review, AT&T re-examined its proposed installation to see if it could lower the height of the proposed tower or find different ways to mount its antennas to make its installation less visible. After exploring several alternatives, AT&T's RF consultants concluded that lowering the height of AT&T's antennas could cause interference problems with Verizon's antennas on the same roof. The interference problems could be mitigated, but not eliminated, by changing the azimuths of AT&T's antennas. However, lowering the height of the antennas and changing their azimuths would markedly reduce the area that could be covered from this site. Other alternatives were eliminated by landlord restrictions and structural limitations of the building. In its supplemental materials, AT&T did include an engineer's structural analysis of the proposed rooftop tower. This analysis concluded that the existing building framing is structurally capable of supporting the proposed tower installation with modifications. The Council representatives who attended the field review are satisfied that AT&T's supplemental filing represents a good faith effort to explore alternatives and agree with AT&T's conclusion that the installation as proposed is the best feasible solution for providing needed coverage from this site.



Note: View is looking southward; rail trail is along right side of building

Photosimulation of AT&T antennas on building at 168 Center Street Simulation



Note: This vantage point makes the street utility pole appear to be approximately the same height and bulk as the proposed tower on top of the building, except that it would be located in line with the third window to the right.

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CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN PIESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.

BUILDING CODE: CONNECTICUT STATE BUILDING BOCA NATIONAL BUILDING CODE THE INTERNATIONAL BUILDING CODE, IBC, ELECTRICAL CODE: CONNECTICUT STATE FIRE SAFETY CODE NATIONAL FIRE PROTECTION ASSOCIATION FPA 1 FIRE CODE NATIONAL ELECTRICAL CODE (NEC)

STRUCTURAL ANTENNA
TOWER AND ANTENNA SUPPORTING STRUCTURES:
TO 407, COMMERCIAL BULDING GROUNDING AND BOHDING REQUIREMENTS FOR TELECOMMUNICATIONS
INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (BEE) 81, GUIDE FOR MEASURING EARTH
RESISTITITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM IEEE 1100 (1999) RECOMMENDED PRACTICES FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT IEEE C62.41 RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION

PROJECT TEAM

TODD OLIVER
SMARTLINK, LLC
33 BOSTON POST ROAD WEST, SUITE 210
MARLBOROUGH, MA 01752
(774) 369-3613
bodd.olivsr@smortlinkile.com

SITE ACQUISITION

SMARTLINK, LLC 33 BOSTON POST ROAD WEST, SUITE 210 MARLBOROUGH, MA 01752 (401) 207-1088

ADAM BRAILLARD SMARTLINK, LLC 33 BOSTON POST ROAD WEST, SUITE 210 MARLBOROUGH, MA 01752 (774) 359–3613

adam braillard@smartlinklic.com

ENGINEER:

MARC R. CHRETIEN, P.E. ADVANCED ENGINEERING GROUP, P.C. 500 NORTH BRCADWAY EAST PROVIDENCE, RI 02914 (401) 354-2403

RF ENGINEER

CAMERON SYME AT&T MOBILITY - NEW ENGLAND 550 COCHITUATE ROAD, SUITE 13 AND 14 FRAMINGHAM, MA 01701 (508) 596-7146

cs6970@att.com

CONSTRUCTION MANAGER:

NEIL COON SMARTLINK, LLC 33 BOSTON POST ROAD WEST, SUITE 210 MARLBOROUGH, MA 01752 (203) 410-8871 Neil coon@mmgrtfinklic.com

SITE INFORMATION

APPLICANT/LESSEE:

PROPERTY OWNER

FACTORY SQUARE REALTY LLC ONE FACTORY SQUARE, SUITE SOUTHINGTON, CT 06489

73' ABOVE GROUND LEVEL (AGL)

ADDRESS: CITY, STATE:

168 CENTER STREET SOUTHINGTON, CT 06489

LATTITUDE:

41' 36' 04.46" -72" 52" 56.20"

LONGITUDE: LAT./LONG. TYPE:

STRUCTURE HEIGHT:

GROUND ELEVATION: 149' (AMSL)

ANTENNA CENTERLINE HEIGHT: 69' ABOVE GROUND LEVEL (AGL)

ZONING DISTRICT: INDUSTRIAL I-1

UNMANNED TELECOMMUNICATIONS FACILITY PROPOSED USE:

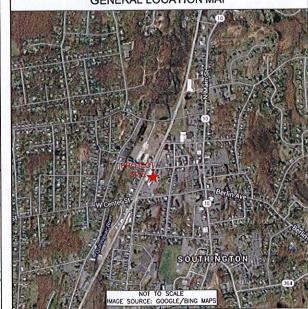
NAD 83



Southington Community YMCA: • Membership Services

Cork & B

GENERAL LOCATION MAP



DRIVING DIRECTIONS

DIRECTIONS FROM 500 ENTERPRISE DR. ROCKY HILL, CT 06067:

1. HEAD NORTHEAST ON ENTERPRISE DR TOWARD CAPITAL BLVD 0.3 MI

NOT TO SCALE IMAGE SOURCE: GOOGLE/BING MAPS

VICINITY MAP

SITE

- 3. TURN LEFT ONTO WEST ST 0.3 MI
- 4. TURN LEFT TO MERGE ONTO I-91 S 9.1 MI 5. TAKE EXIT 18 FOR I-691 W TOWARD MERIDEN/WATERBURY 0.2 MI
- 6. EXIT 18 TURNS SLIGHTLY RIGHT AND BECOMES I-691 W 4.4 MI
- 7. TAKE EXIT 4 FOR CT-322 TOWARD SOUTHINGTON 0.2 MI
- 8. TURN RIGHT ONTO CT-322 W 0.3 MI
- 10. TURN RIGHT ONTO CT-10 N O.4 MI
- 11. TURN LEFT ONTO CENTER ST DESTINATION WILL BE ON THE LEFT 0.2 MI

CONSTRUCTION DRAWINGS

UNDERGROUND SERVICE ALERT



CALL TOLL FREE 1-888-344-7233 OR 811 72 HOURS BEFORE YOU DIG

GENERAL CONTRACTOR NOTES

CONTRACTOR: SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ARCHITET/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION, A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRANAGE, NO SANTON SEWER SERVICE, PORTRALE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO

PROJECT DESCRIPTION

THIS PROJECT WILL BE COMPRISED OF NEW AT&T ANTENNAS. (4) ANTENNAS PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (12) ANTENNAS; NEW AT&T REMOTE RADIO UNITS (RRU'S), (9) RRU'S PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (27) RRU'S ON A PROPOSED UNED TOWER MOUNTED TO ROOFTOP: NEW INDOOR TELECOMMUNICATION EQUIPMENT INSIDE A PROPOSED AT&T EQUIPMENT ROOM. NEW NATURAL GAS GENERATOR TO BE INSTALLED IN REAR OF BUILDING FOR BACKUP POWER.

SHEET INDEX

DESCRIPTION

TITLE SHEET

PLOT/SITE PLAN

PARTIAL ROOF PLAN & EQUIPMENT ROOM PLAN

ELEVATION

FOUIPMENT ROOM PLAN

FOUIPMENT ROOM SECTION & NOTES

ANTENNA PLAN. DETAILS & RF SCHEDULE/B.O.M.

EQUIPMENT DETAILS

DETAILS

GENERATOR DETAILS

STRUCTURAL PLANS & DETAILS









IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

DRAWING REVISIONS 03/06/15 REVISED DRAWING 02/17/15 ISSUED FOR REVIEW DESCRIPTION PROJECT INFORMATION

SITE NUMBER: CT2583S-A FA NUMBER: 11571102

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2

168 CENTER STREET SOUTHINGTON, CT 06489 HARTFORD COUNTY

DD	MRC
SHEET	TITLE

TITLE SHEET

REVISION

T-1

A-5 A-6 A-7 A-8 S-1

NUMBER

S-2 S-3 STRUCTURAL DETAILS E-1 ELECTRICAL & TELCO RISER, ONE-LINE DIAGRAM,

G-1 MECHANICAL PLAN

GROUNDING NOTES

- 1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
- 2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
- 3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
- 4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
- 5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #2 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
- 6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- 7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- 8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
- 9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING
- 10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- 11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWS COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS
- 12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE 1/2" OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

- 1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

 CONTRACTOR TOWER RESOURCE MANAGEMENT SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION) AT&T MOBILITY
- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
- 5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON
- "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR, ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.
- THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- 8 IF THE SPECIFIED FOUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL
- SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
- 10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
- SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED
- 12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN
- 13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
- 14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR—ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
- 15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. WIDE-FLANGE STEEL SHALL CONFORM TO ASTM A992; HHS STEEL SHAPES SHALL CONFORM TO ASTM A500, GRADE B; STEEL PIPE SHALL CONFORM TO ASTM A53, GRADE B; ALL OTHER STEEL SHAPES SHALL CONFORM TO ASTM A36 (OR GREATER). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT

16. CONSTRUCTION SHALL COMPLY WITH UMTS SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF

- AT&T MOBILITY SITES." 17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
- 18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER
- 19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE
- 20. APPLICABLE BUILDING CODES: SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN FEFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

BUILDING CODE: CONNECTICUT STATE BUILDING CODE WHICH USES INTERNATIONAL BUILDING CODE (IBC) 2005 CT SUPPLEMENT WITH 2009 AMMENDMENT AS BASE STANDARDS FOR THE STATE CODES FOR NON-RESIDENTIAL STRUCTURES ELECTRICAL CODE:REFER TO ELECTRICAL DRAWINGS LIGHTNING CODE: REFER TO ELECTRICAL DRAWINGS

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION:

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-G, STRUCTURAL STANDARDS FOR STEEL

ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES: REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN

GENERAL NOTES

ANNOTATION



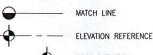
DETAIL REFERENCE DETAIL NO.2 ON SHEET E3



ELEVATION REFERENCE



SECTION REFERENCE



GRID REFERENCE MATCH LINE



SPOT ELEVATION

LINETYPES

EXISTING OBJECTS (GRAY) PROPOSED OBJECTS (BLACK) ---- EXISTING OBJECTS TO BE REMOVED - CENTERLINE X ---- CHAIN LINK FENCING

- OHW----- OVERHEAD UTILITY WIRES - EXISTING PROPERTY BOUNDARY

TELEPHONE LINE **HATCH**



BUILDING OR





CONCRETE







ABBREVIATIONS

		ADDI	LVIATIONS		
AGL	ABOVE GRADE LEVEL	(F)	FUTURE	REQ	REQUIRED
AWG	AMERICAN WIRE GAUGE	G.C.	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
BCW	BARE COPPER WIRE	MGB	MASTER GROUND BUS	RRH	REMOTE RADIO HEAD
BTS	BASE TRANSCEIVER STATION	MIN	MINIMUM	TBD	TO BE DETERMINED
(E)	EXISTING	(P)	PROPOSED/NEW	TBR	TO BE REMOVED
EG	EQUIPMENT GROUND	N.T.S.	NOT TO SCALE	TBRR	TO BE REMOVED
EGR	EQUIPMENT GROUND RING	REF	REFERENCE		AND REPLACED
				TYP	TYPICAL



550 COCHITUATE ROAD, SUITES 13 & 14, FRAMINGHAM, MA 01701-4681





500 NORTH BROADWAY EAST PROVIDENCE, RI 02914



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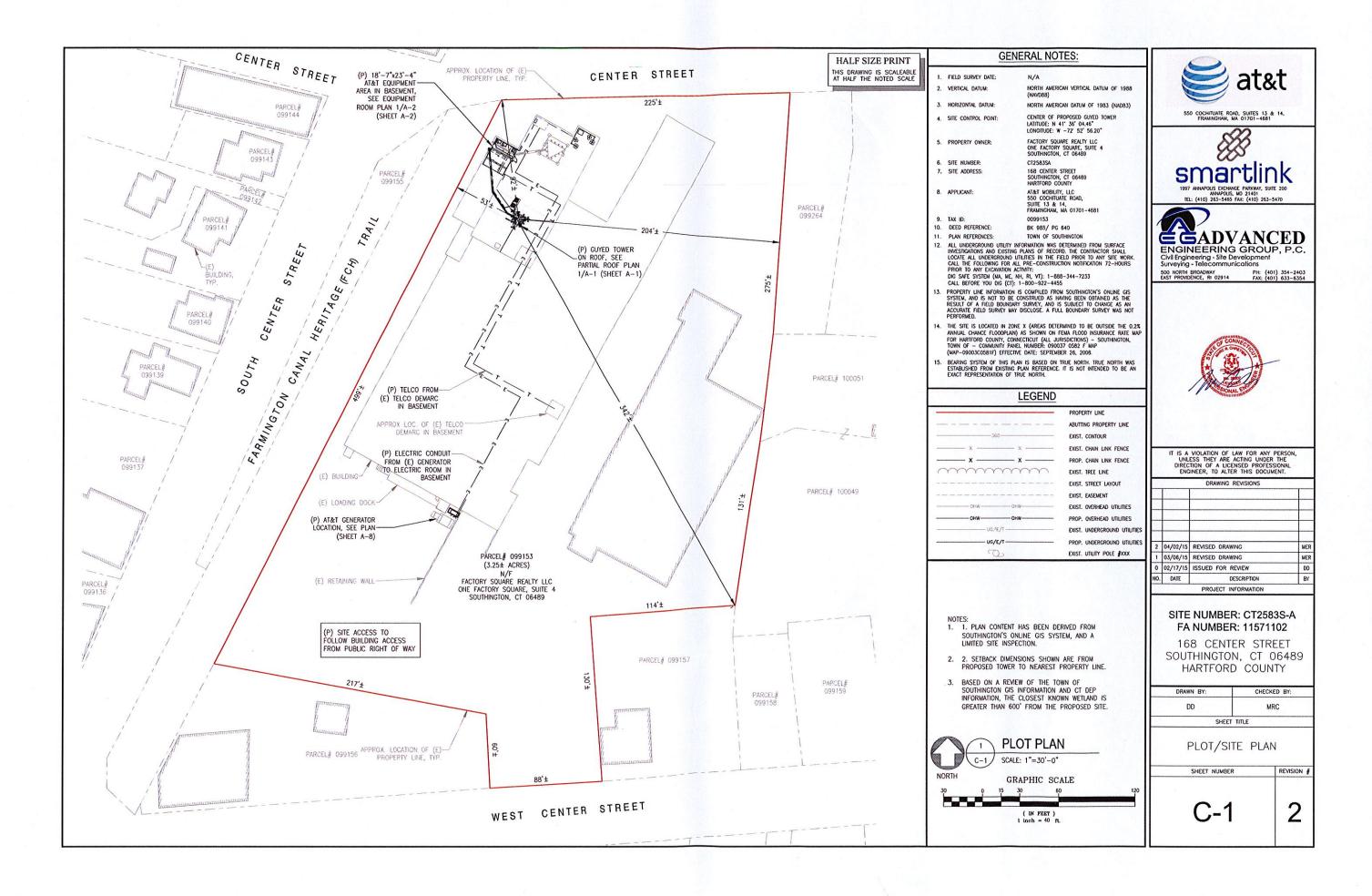
168 CENTER STREET SOUTHINGTON, CT 06489 HARTFORD COUNTY

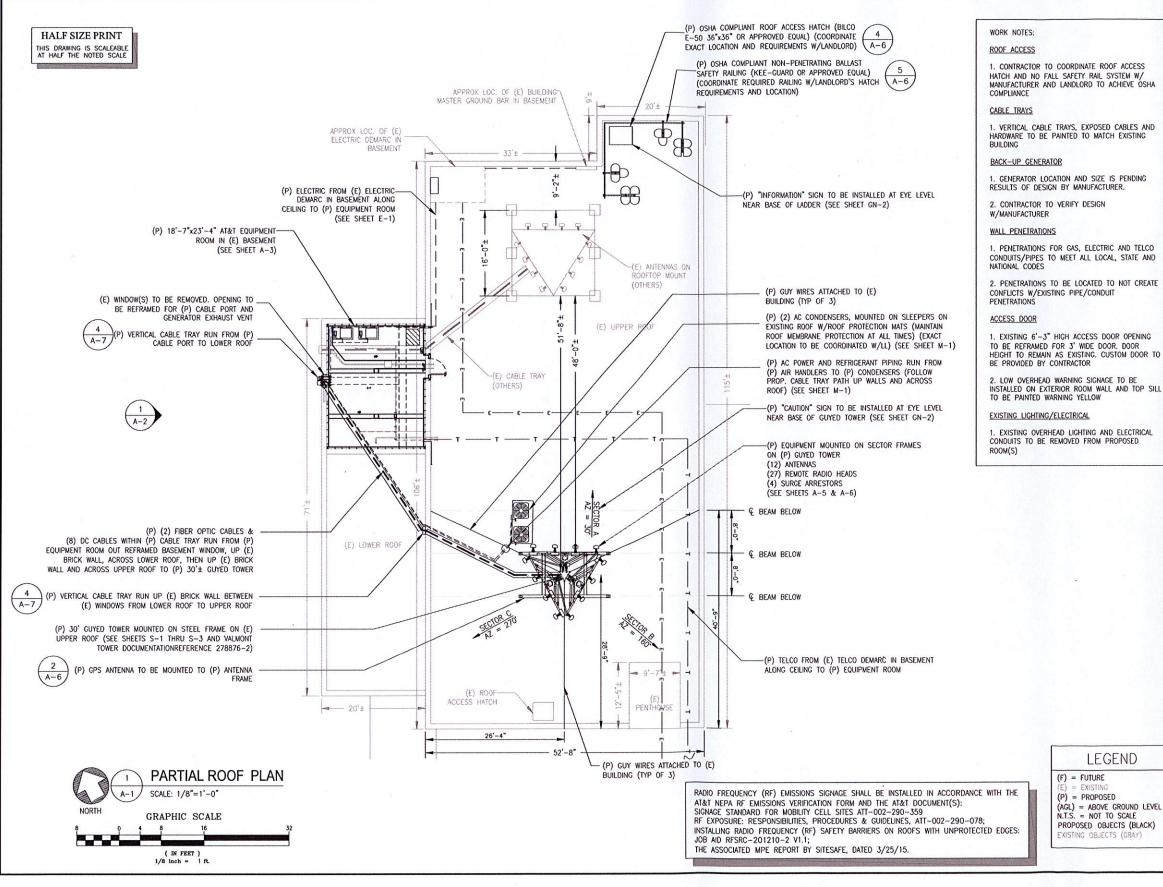
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GENERAL NOTES

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1. CONTRACTOR TO COORDINATE ROOF ACCESS HATCH AND NO FALL SAFETY RAIL SYSTEM W/ MANUFACTURER AND LANDLORD TO ACHIEVE OSHA

1. VERTICAL CABLE TRAYS, EXPOSED CABLES AND HARDWARE TO BE PAINTED TO MATCH EXISTING

- 1. GENERATOR LOCATION AND SIZE IS PENDING RESULTS OF DESIGN BY MANUFACTURER.
- 2. CONTRACTOR TO VERIFY DESIGN
- 1. PENETRATIONS FOR GAS, ELECTRIC AND TELCO CONDUITS/PIPES TO MEET ALL LOCAL, STATE AND NATIONAL CODES
- 2. PENETRATIONS TO BE LOCATED TO NOT CREATE CONFLICTS W/EXISTING PIPE/CONDUIT PENETRATIONS
- 1. EXISTING 6'-3" HIGH ACCESS DOOR OPENING TO BE REFRAMED FOR 3' WIDE DOOR. DOOR HEIGHT TO REMAIN AS EXISTING. CUSTOM DOOR TO BE PROVIDED BY CONTRACTOR
- 2. LOW OVERHEAD WARNING SIGNAGE TO BE INSTALLED ON EXTERIOR ROOM WALL AND TOP SILL TO BE PAINTED WARNING YELLOW

EXISTING LIGHTING/ELECTRICAL

1. EXISTING OVERHEAD LIGHTING AND ELECTRICAL CONDUITS TO BE REMOVED FROM PROPOSED

LEGEND



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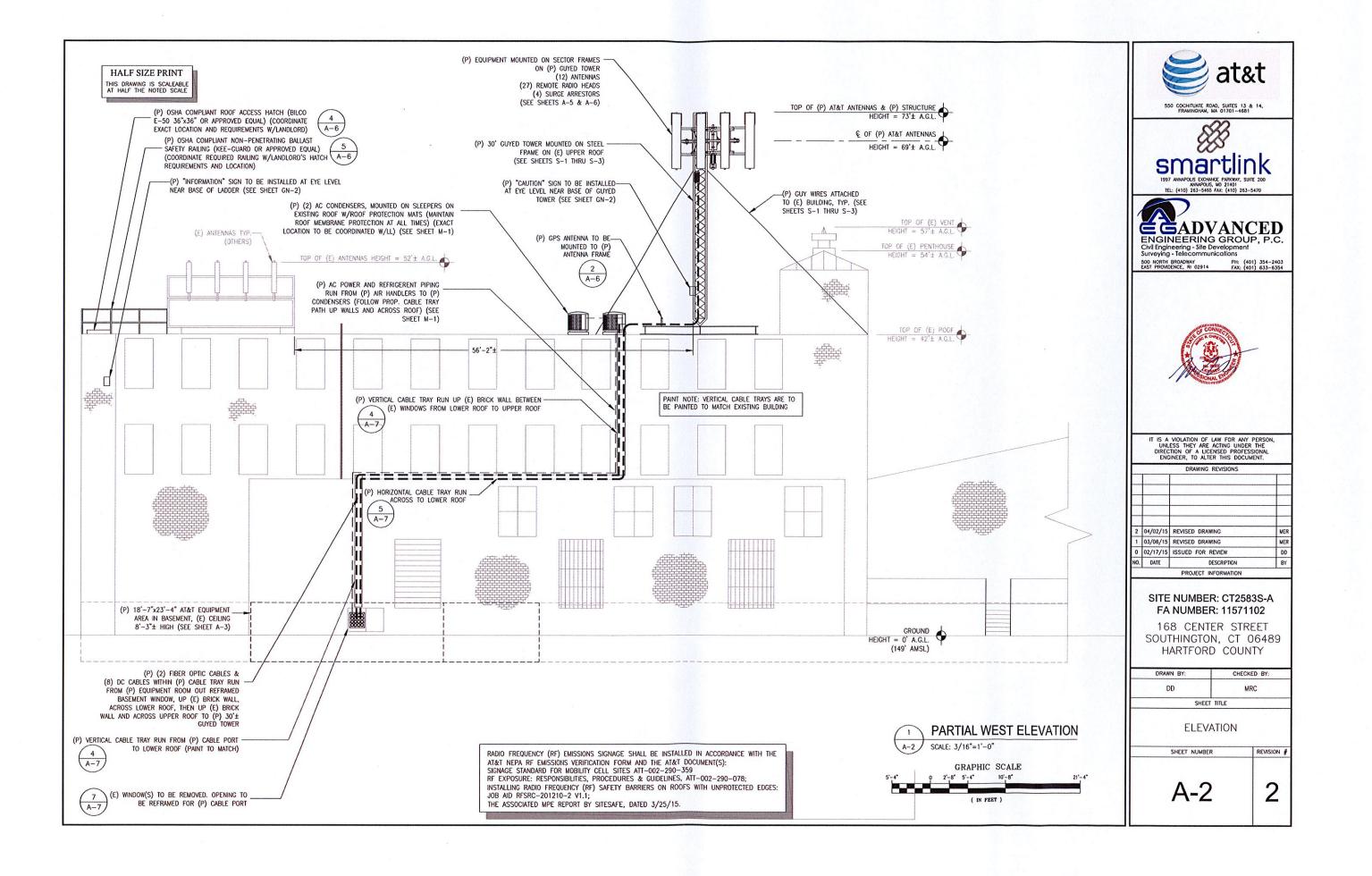
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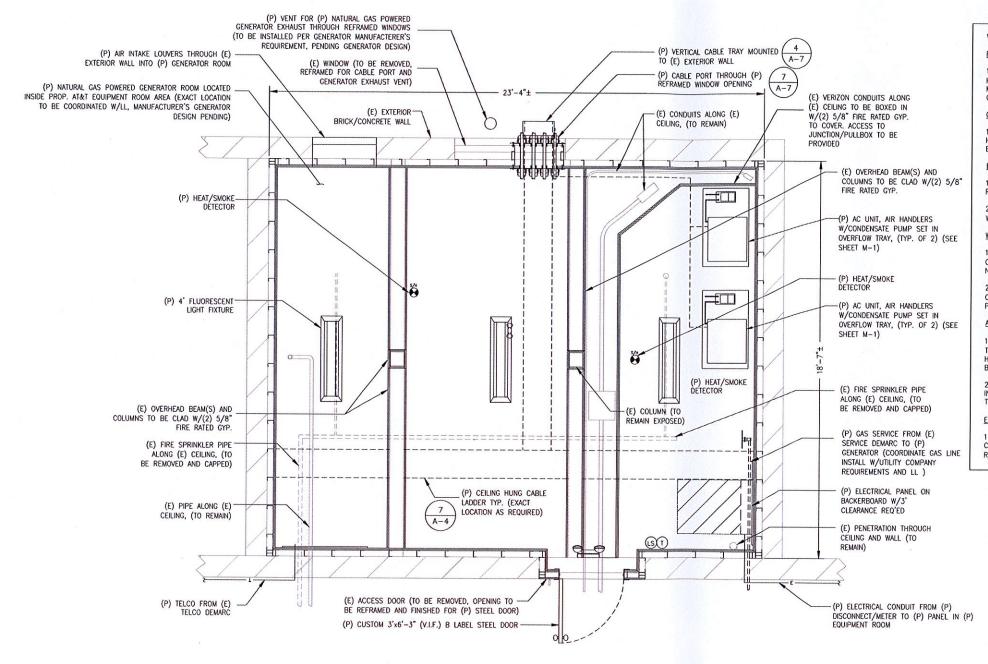
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PARTIAL ROOF PLAN & EQUIPMENT ROOM PLAN

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A-1





WORK NOTES:

ROOF ACCESS

1. CONTRACTOR TO COORDINATE ROOF ACCESS HATCH AND NO FALL SAFETY RAIL SYSTEM W/MANUFACTURER AND LANDLORD TO ACHIEVE OSHA COMPLIANCE

CABLE TRAYS

 VERTICAL CABLE TRAYS, EXPOSED CABLES AND HARDWARE TO BE PAINTED TO MATCH EXISTING BUILDING

BACK-UP GENERATOR

- 1. GENERATOR LOCATION AND SIZE IS PENDING RESULTS OF DESIGN BY MANUFACTURER.
- 2. CONTRACTOR TO VERIFY DESIGN W/MANUFACTURER

WALL PENETRATIONS

- 1. PENETRATIONS FOR GAS, ELECTRIC AND TELCO CONDUITS/PIPES TO MEET ALL LOCAL, STATE AND NATIONAL CODES
- 2. PENETRATIONS TO BE LOCATED TO NOT CREATE CONFLICTS W/EXISTING PIPE/CONDUIT PENETRATIONS

ACCESS DOOR

- 1. EXISTING 6'-3" HIGH ACCESS DOOR OPENING TO BE REFRAMED FOR 3' WIDE DOOR, DOOR HEIGHT TO REMAIN AS EXISTING. CUSTOM DOOR TO BE PROVIDED BY CONTRACTOR
- 2. LOW OVERHEAD WARNING SIGNAGE TO BE INSTALLED ON EXTERIOR ROOM WALL AND TOP SILL TO BE PAINTED WARNING YELLOW

EXISTING LIGHTING/ELECTRICAL

1. EXISTING OVERHEAD LIGHTING AND ELECTRICAL CONDUITS TO BE REMOVED FROM PROPOSED ROOM(S)



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EADVANCED

ENGINEERING GROUP, P.C. Civil Engineering - Site Development Surveying - Telecommunications
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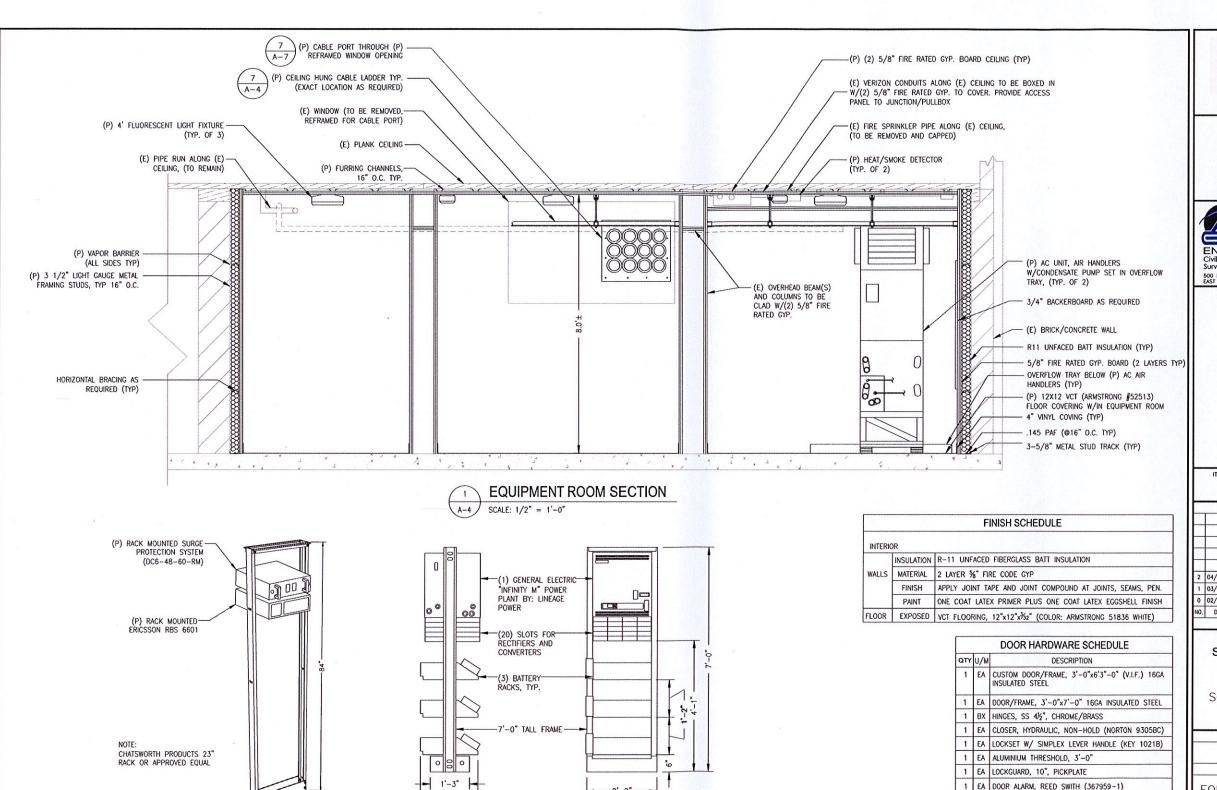
EQUIPMENT ROOM PLAN

SHEET NUMBER

A-3

REVISION #

1 EQUIPMENT ROOM PLAN
A-3 SCALE: 1/2"=1'-0"



FRONT VIEW

POWER PLANT DETAIL

SCALE: N.T.S.

SIDE VIEW

EQUIPMENT RACK DETAIL

SCALE: N.T.S.



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EQUIPMENT ROOM SECTION & NOTES

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A-4

BUMPER, RUBBER STOP

4 LITHONIA MODEL #SB 2 32 120 GED
PRESCOLITE NOVUS NV SERIES

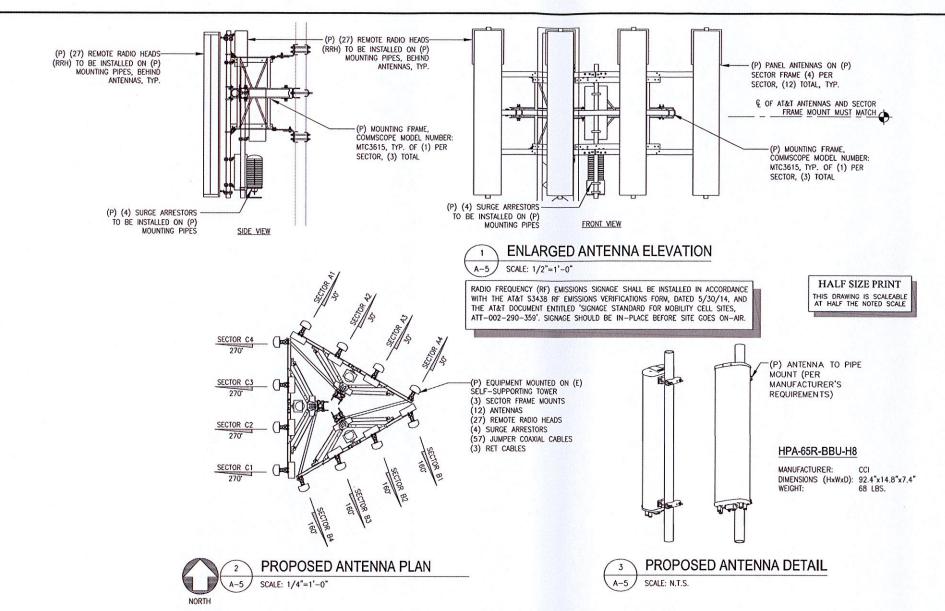
SYMBOL QTY

2 EA WEATHER STRIPPING KIT, FOR 3'-0"x7'-0" DOOR

LIGHTING SCHEDULE

DESCRIPTION

2



RRH IN	FORMATI	ION			ANTENNA IN	IFORMATION												
MAKE MODEL OTY		OTV	SECTOR	POSITION	MAKE	MODEL	FEED	AZIMUTH	RAD CTR	FIBER/POWER	FEEDERS	MECHANICAL		ELEC	TRICAL	DOWNT	ILT	
MAKE MOD	MODEL	un	SECTOR	POSITION	WAKE	MODEL	FEED	AZIMOTA	(AGL)	LENGTH	FEEDERS	DOWNTILT	PORT 1	PORT 2	PORT 3	PORT 4	PORT 5	PORT
ERICSSON		3		IA	CCI	HPA-65R-BUU-H8	воттом	30°	69±	170±	FIBER/DC POWER	0.	0°					
ERICSSON	RRUS-12	2		IIA	CCI	HPA-65R-BUU-H8	воттом	30°	69±	170±	FIBER/DC POWER	0.	0°					
ERICSSON ERICSSON	A-2 E-2	2	ALPHA	IIIA	CCI	HPA-65R-BUU-H8	воттом	30°	69±	170±	FIBER/DC POWER	0.	0,					
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ERICSSON	RRUS-11	3		IB	CCI	HPA-65R-BUU-H8	воттом	160°	69±	170±	FIBER/DC POWER	0.	0*					
	RRUS-12	2		IIB	CCI	HPA-65R-BUU-H8	воттом	160°	69±	170±	FIBER/DC POWER	0.	0°					
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ERICSSON		1		IVB	CCI	HPA-65R-BUU-H8	воттом	160°	69±	170±	FIBER/DC POWER	0.	0*					
ERICSSON	RRUS-11	3		IC	CCI	HPA-65R-BUU-H8	воттом	270°	69±	170±	FIBER/DC POWER	0.	0*					
ERICSSON		2		IIC	CCI	HPA-65R-BUU-H8	воттом	270°	69±	170±	FIBER/DC POWER	0.	0°					
ERICSSON	A-2	2 GAN	GAMMA	IIIC	CCI	HPA-65R-BUU-H8	воттом	270°	69±	170±	FIBER/DC POWER	0.	0.					
ERICSSON ERICSSON	E-2	1		IVC	CCI	HPA-65R-BUU-H8	воттом	270*	69±	170±	FIBER/DC POWER	0,	0.					

* CONTRACTOR TO VERIFY FINAL RFDS AND CABLE LENGTHS PRIOR TO CONSTRUCTION



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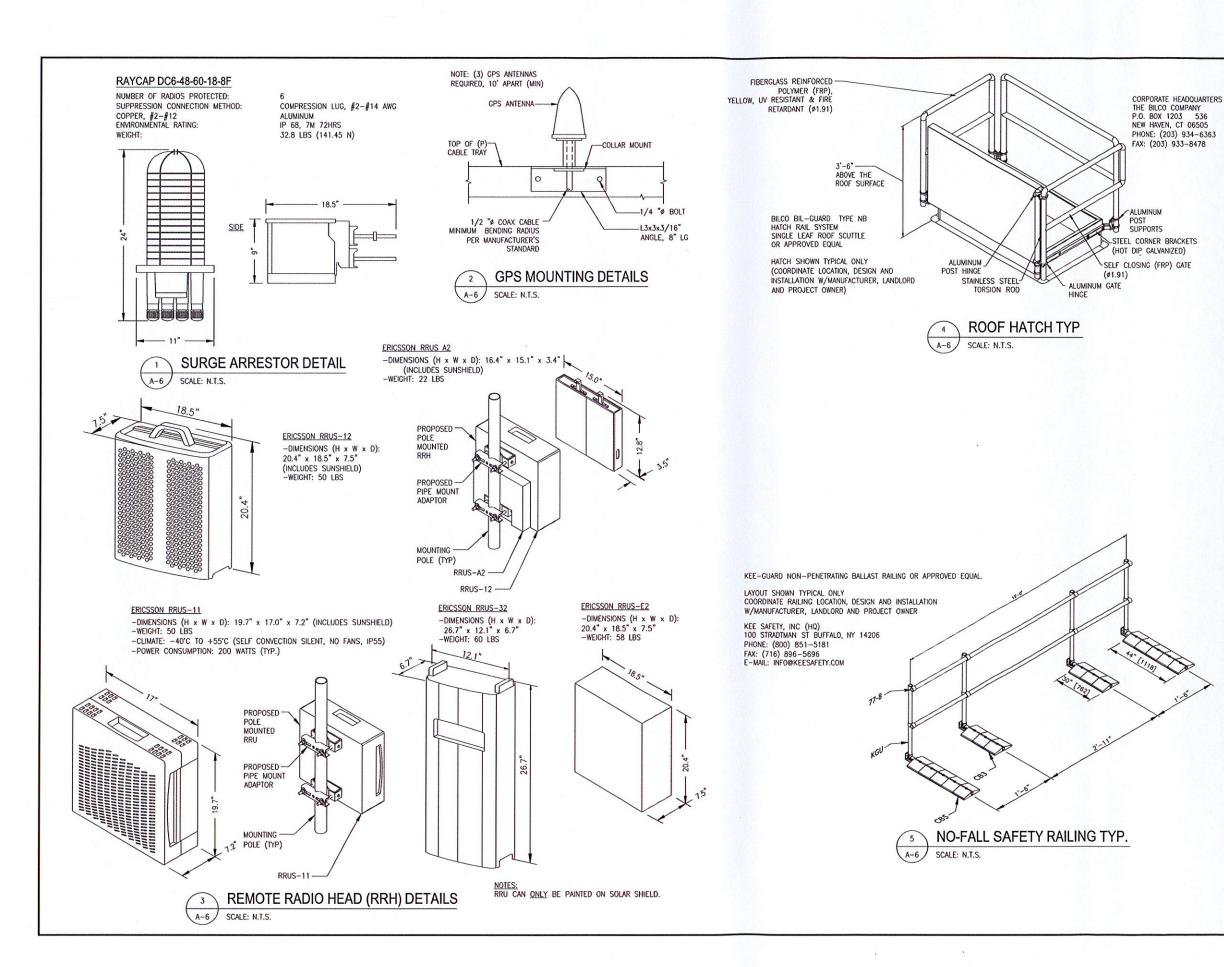
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ANTENNA PLAN, DETAILS, & RF SCHEDULE

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A-5





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ANNAPOUS, MO 21401 TEL: (410) 263-5465 FAX: (410) 263-5470

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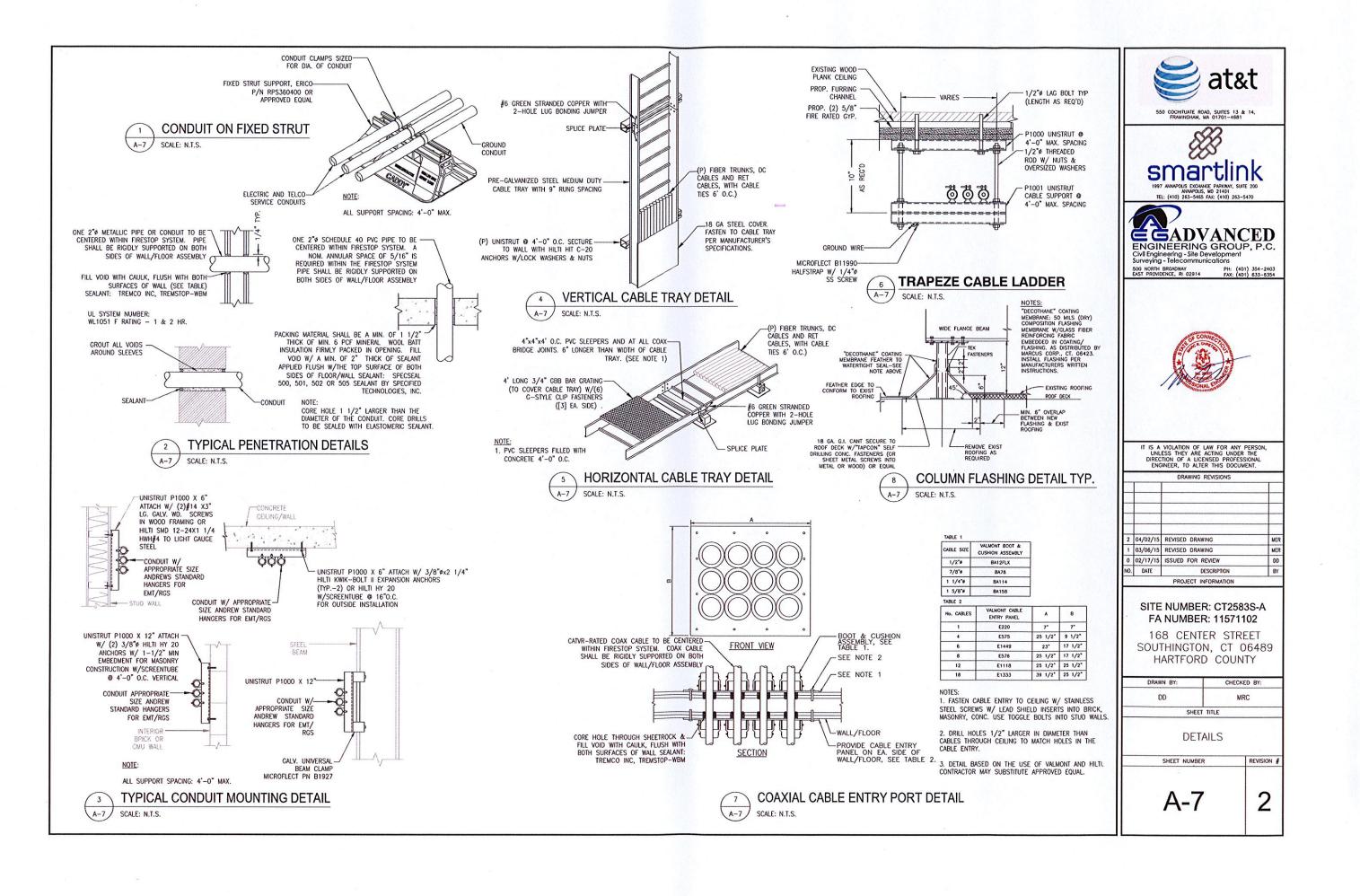
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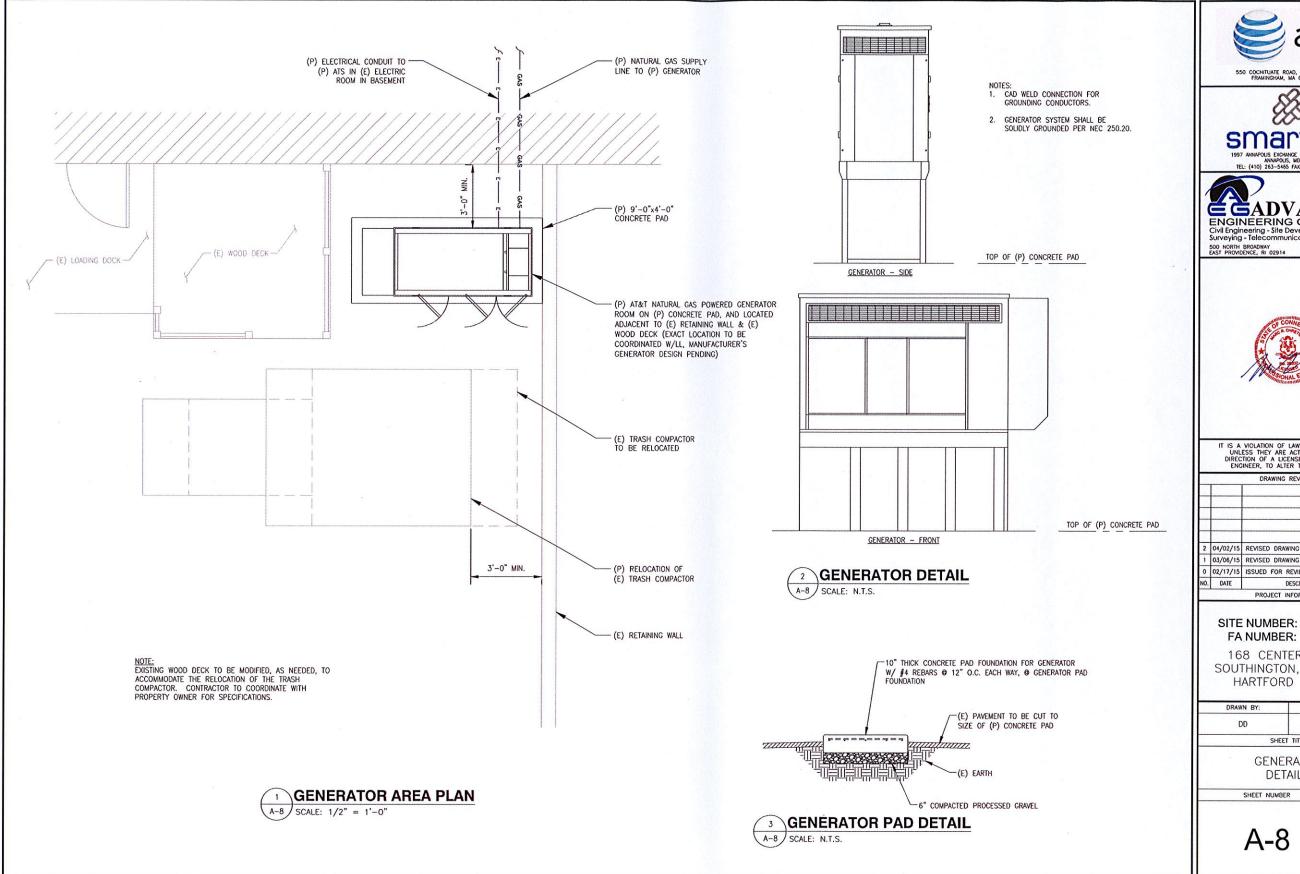
EQUIPMENT DETAILS

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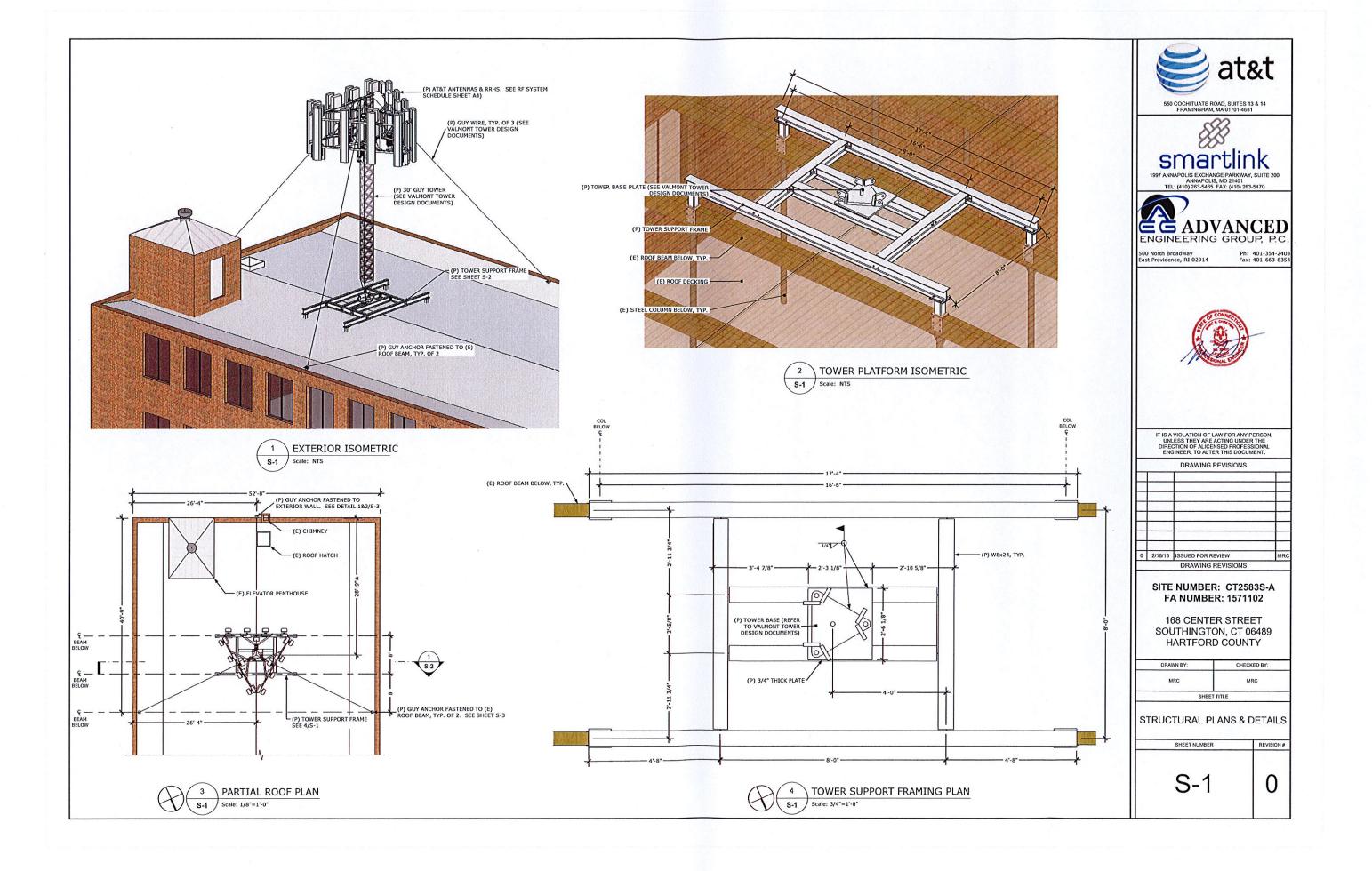
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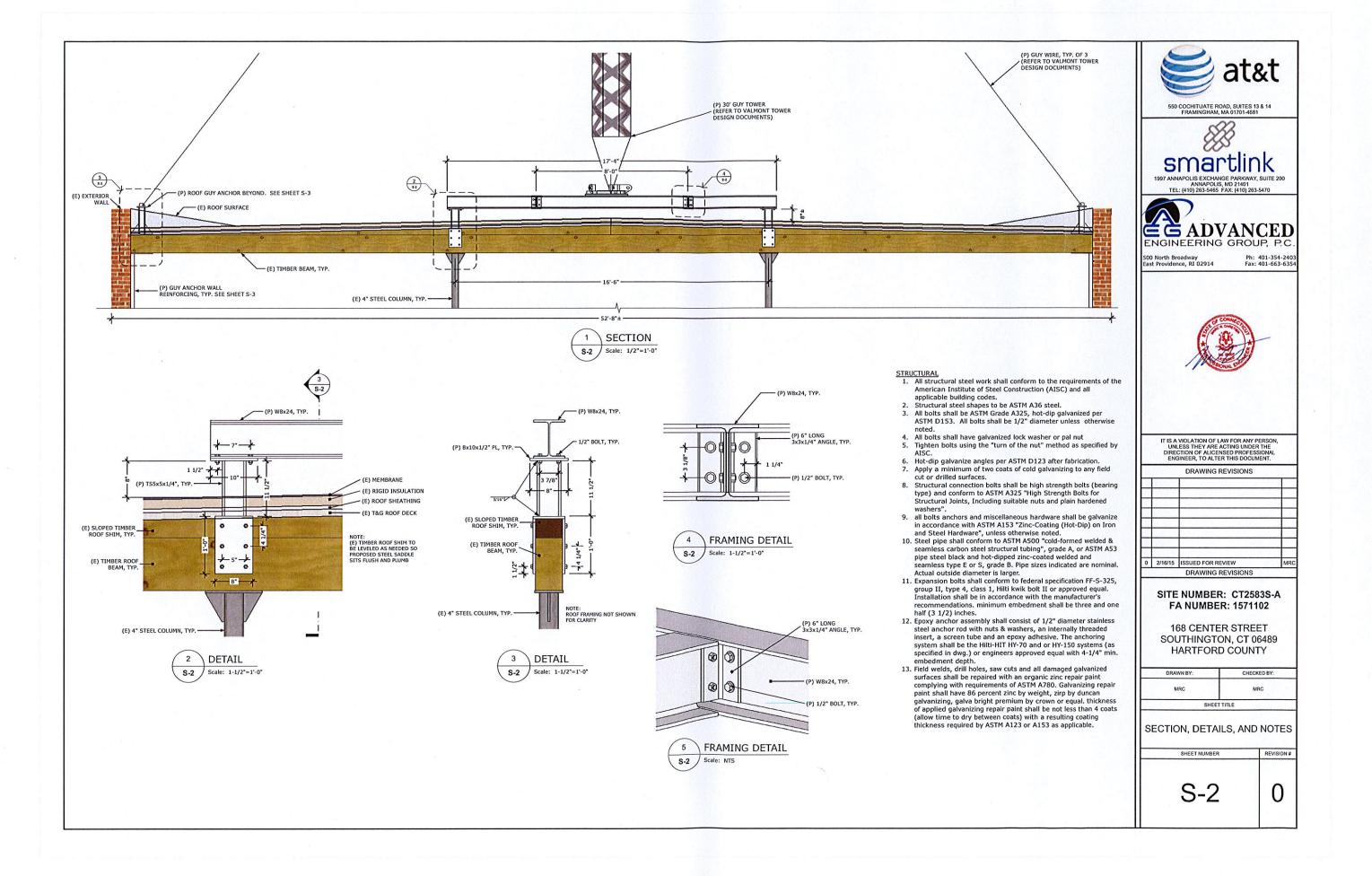
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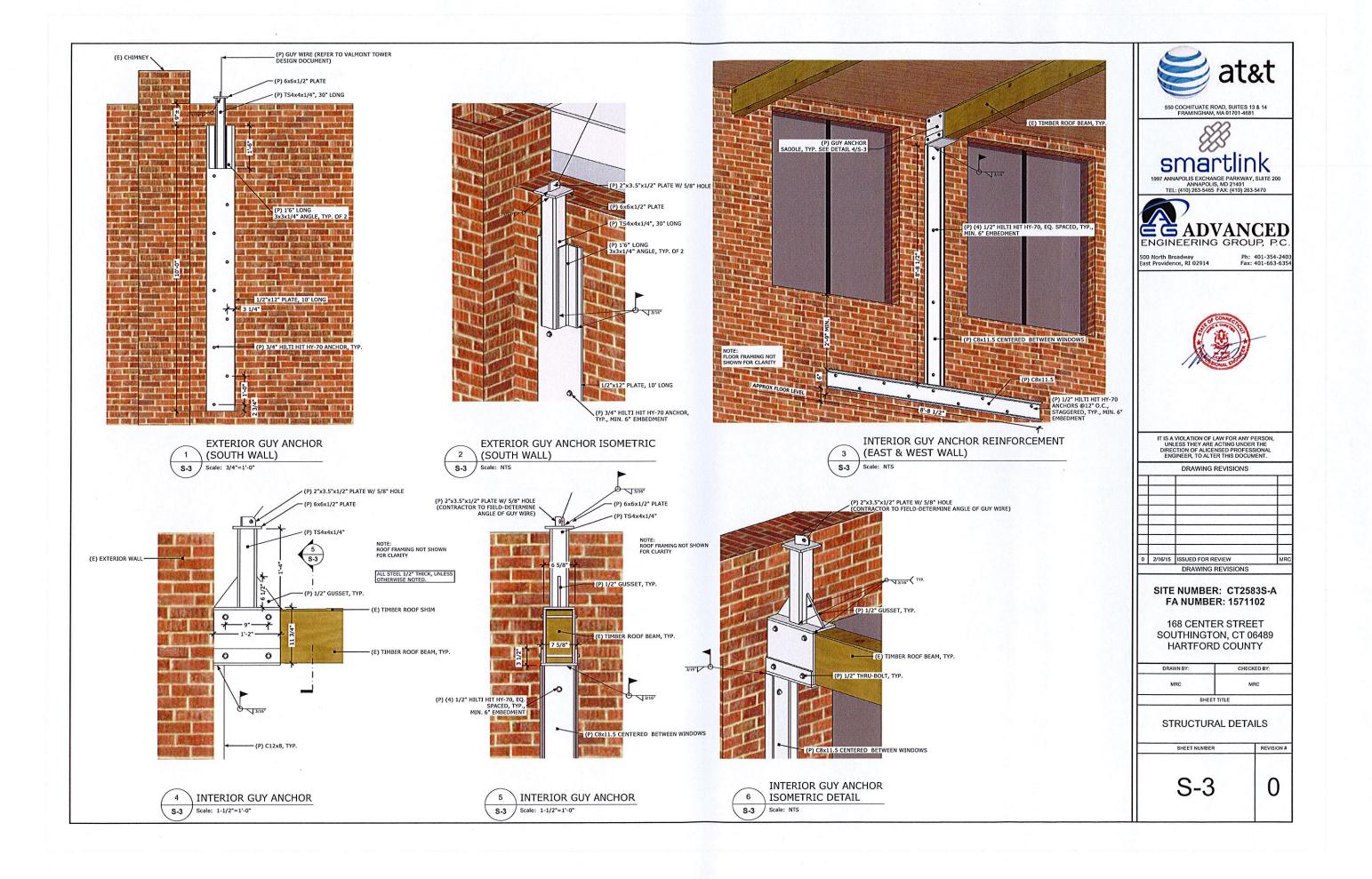
GENERATOR **DETAILS**

SHEET NUMBER REVISION #

A-8







GENERAL ELECTRICAL NOTES

- 1. ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH ALL COVERNING STATE, COUNTY AND LOCAL CODES, O.S.H.A.. NEC 2008, NFPA P70, AT&T MOBILITY SPECIFICATIONS. AND THE SPECIFICATIONS DETAILED IN THESE PLANS.
- 2. SUBMITTAL OF BID INDICATES CONTRACTOR IS COCHIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
- 3. CONTRACTOR SHALL PERFORM ALL VERIFICATION, OBSERVATION, TESTS. AND EXAMINATION WORK PRIOR TO THE ORDERING OF THE ELECTRICAL COUPMENT AND THE ACTUAL CONSTRUCTION, CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE PROJECT MANAGER LISTING ALL MALFUNCTIONS. FAULTY EQUIPMENT, AND DISCREPANCIES.
- 4. THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE. CONTRACTOR SHALL ENSURE THAT ACCESS TO EQUIPMENT IS MAINTAINED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS AND ALL APPLICABLE CODES.
- 5. EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANELBOARD, PULLBOX. J--BOX, SWITCH BOX, ETC.. IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA).
- 6. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION. ETC., FOR A COMPLETE AND PROPERLY OPERATIVE SYSTEM, ENERGIZED THROUGHOUT AND AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
- 7. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORY AND SHALL BEAR THE INSPECTION LABEL "IF WHERE SUBJECT TO SUCH APPROVAL MATERIALS SHALL MEET WITH APPROVAL OF ALL COVERNING BODIES NAMING JURISDICTION, MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI. NEMA, IEEE, AND NFPA.
- 8. ALL CONDUIT INSTALLED MAY BE SURFACE MOUNTED UNLESS OTHERWISE NOTED.
- 9. COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE. UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
- 10. ALL "CONDUIT ONLY" (CO.) INSTALLATIONS SHALL HAVE A 3/8" PULL WIRE OR ROPE.
- 11. CONTRACTOR SHALL PROVIDE AT&T MOBILITY MANAGER WITH ONE SET OF COMPLETE ELECTRICAL 'AS INSTALLED' DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROISINGS, AND CIRCUITS,
- 12. ALL BROCHURES. OPERATING MANUALS. CATALOGS, SHOP DRAWINGS. ETC. SHALL BE TURNED OVER TO OWNER AT JOB COMPLETION.
- 13. POWER WIRE AND CABLE CONDUCTORS SHALL BE COPPER #12 AWG MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE ON DRAWINGS CONDUCTORS #10 AWG AND SMALLER SHALL BE SOLID.
- 14. ALL CONDUCTORS LARGER THAN 110 AWG SHALL BE STRANDED COPPER WITH THWN 600V INSULATION, UNLESS NOTED OTHERWISE.
- 15. ALL MATING SURFACES OF GROUND CONNECTIONS SHALL BE CLEANED SMOOTH AND COATED WITH ANTIOXIDANT PRIOR TO ATTACHMENT,
- 16. ALL GROUND CONNECTIONS BELOW GRADE MUST BE EXOTHERMICALLY WELDED (CAD WELD OR APPROVED EQUAL)
- 17. ALL EXTERIOR GROUNDING CONDUCTORS SHALL BE 2 AND SOLID TINNED BARE COPPER WIRE UNLESS NOTED OTHERWISE.
- 18. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C. COORDINATE SHORT CIRCUIT REQUIREMENTS WITH LOCAL UTILITY COMPANY.
- 19 CONTRACTOR SHALL PATCH REPAIR, AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COLIRSE OF THE ELECTRICAL WORK
- 20. IN DRILLING HOLES INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, M PIPE RUNS, ETC., IT MUST BE CLEARLY UNDERSTOOD THAT TENDONS AND/OR REINFORCING STEEL WILL NOT BE DRILLED INTO, CUT OR DAMAGED UNDER ANY CIRCUMSTANCES.
- 21. LOCATION OF TENDONS AND/OR REINFORCING STEEL ARE NOT DEFINITELY KNOWN AND, THEREFORE, MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT WA X-RAY OR OTHER DEVICES THAT CAN ACCURATELY LOCATE THE REINFORCING AND/OR STEEL TENDONS.
- 22. PENETRATIONS IN FIRE RATED WALLS SHALL BE SEALED IN ACCORDANCE WITH ALL APPLICABLE CODES.
- 23. ALL MATERIALS SHALL BE U.L. LISTED

- 24. CONDUIT:

 On RIGHD CONDUIT SHALL BE ULL LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS. IN MASORYY WALLS OR EXPOSED ON BUILDING EXTERIOR, RIGHD CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.

 b. ELECTRICAL METALLIC TUBING SHALL HAVE ULL LABEL FITTINGS SHALL BE QLAID RING COMPRESSION TYPE EMT SHALL BE USED ONLY FOR INTERIOR RUMS.

 C. FLEXIBLE METALLIC CONDUIT SHALL NAVE ULL LISTED LABEL AND MAY BE USED WHERE PERMITTED BY CODE. FITTINGS SHALL BE

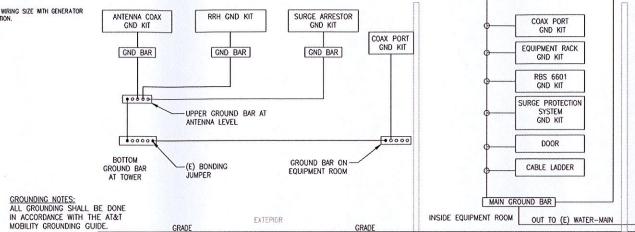
 "JAKE" OR "SQUEEZE" TYPE, SEAL TIGHT FLEXIBLE CONDUIT. ALL CONDUIT SHALL NAVE FULL SIZE GROUND WRITE

 "A CONDUIT RUMS MAY BE SURFACE MONITED IN CEILINGS OR WALLS UNLESS INDICATED OTHERWISE. CONDUIT SHALL RUN PAPALLEL OR AT RIGHT ANGLES TO CEILING, FLOOR OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH ENGINEER PRIOR TO
- 25. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS.
- 26. CONTRACTOR SHALL COORDINATE THE ELECTRICAL SERVICE ATTN AT&T MOBILITY' AND LOCAL UTILITY.
- 27. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY NEC AND ALL APPLICABLE CODES.
- 28. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE OWNER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE. CONTRACTOR SHALL SUBMIT TO THE PROJECT MANAGER ALL TEST REPORTS AND ONE COMPLETE SET OF PRINTS SHOWING INSTALLED WORK'.
- 29. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, AND FALL OF POTENTIAL GROUNDING TESTS FOR APPROVAL SUBMIT TEST REPORTS TO PROJECT MANAGER. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.
- 30. ALL EXPOSED GROUND WIRES ROUTED ALONG THE SIDE OF EQUIPMENT SHELTERS OR ROUTED OVER CONCRETE FOUNDATIONS OR OTHER EXISTING STRUCTURES SHALL BE INSTALLED IN PROPERLY ANCHORED 3/4" (MIN.) PVC CONDUIT
- 31. CONTRACTOR SHALL NOT DISTURB EXISTING GROUNDING SYSTEM. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY AT NO ADDITIONAL COST.
- 32. ALL ELEMENTS OF ICE BRIDGE AND AT&T MOBILITY UTILITY BACKBOARD MUST BE BONDED AND JUMPERED TO GROUNDED COMPONENTS OF THESE SYSTEMS.
- 33. ALL INTERIOR CABLES AND WIRING SHALL BE NEATLY ROUTED IN OVERHEAD LADDER RACK AND FASTENED TO LADDER RACK.
- 34, ALL GROUNDING CONDUCTORS SHALL BE ROUTED DOWNWARDS FROM POINT OF ORIGIN TO TERMINATION POINT (GROUND BAR, GROUND RING, ETC.
- 35. GROUNDING CONDUCTORS SHALL NOT REVERSE DIRECTION (EXCEPT HALO & BURIED GROUND RINGS). OTHER EXCEPTIONS NEED TO BE APPROVED BY AT&T MOBILITY CONSTRUCTION MANAGER PRIOR TO INSTALLATION.
- 36. GROUNDING CONDUCTORS SHALL HAVE A MINIMUM BENDING RADIUS OF 8°.
- 37. ALL CONNECTIONS TO GROUND PLATES SHALL BE CAD WELDED TO THE CENTER OF THE PLATE. ALL DETAILS SHOWING CONNECTIONS TO GROUND RODS ARE ALSO VALID FOR SIMILAR CONNECTIONS TO GROUND PLATES.

ELECTRICAL AND TELEPHONE GENERAL NOTES

- 1. FOLLOWING COMPLETION OF WORK, PROVIDE OWNER WITH AS-BUILT DRAWINGS SHOWING TELEPHONE AND ELECTRIC LOCATIONS.
- 2. WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE, NEC 2008.
- 3. COORDINATE WITH UTILITY AND LOCAL ELECTRICAL INSPECTOR FOR FINAL POWER CONNECTION.
- 4. UTILITY WILL SUPPLY METER. COORDINATE WITH UTILITY FOR METER TYPE AND INTERCONNECTION.
- 6. SEAL ALL SERVICE ENTRANCES INTO SHELTER FOLLOWING INSTALLATION
- 7. SEE PAGE G-1 FOR GENERAL GROUNDING NOTES.
- 8. COORDINATE WITH LOCAL TELEPHONE COMPANY FOR ALL ROUTING AND

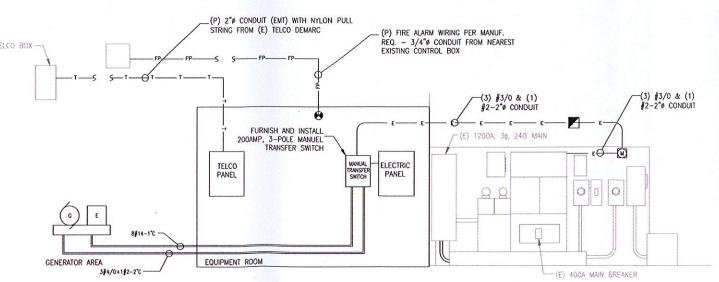
9. CONTRACTOR TO VERIFY CONTROL WRING SIZE WITH GENERATOR MANUFACTURER PRIOR TO CONSTRUCTION.



ONE LINE GROUNDING DIAGRAM SCALE: N.T.S.

#6G AWG INSULATED

GROUNDING HALO (ATTACH W/ NON-METALIC HANGERS)







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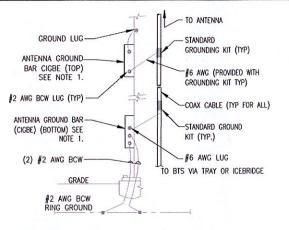
> ELECTRICAL ONE-LINE DIAGRAM & NOTES

> > E-1

SHEET NUMBER

REVISION #

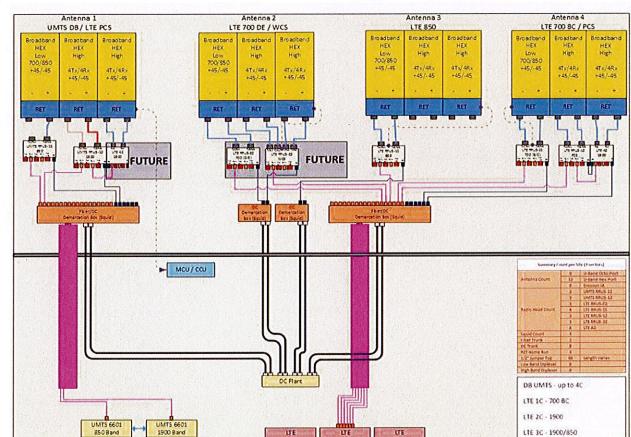


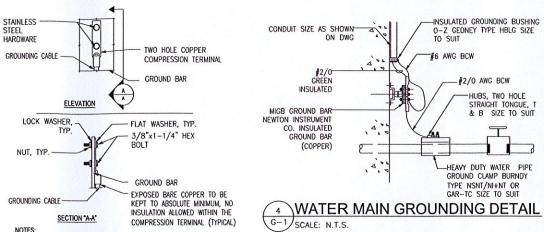


1. NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF TOWER. ANTENNA LOCATION AND CONNECTION ANTENNA LOCATION AND CONNECTION ORIENTATION, PROVIDE AS REQUIRED. 2. A SEPARATE GROUND BAR TO BE USED FOR GPS ANTENNA IF REQUIRED.

TYP. ANTENNA

CABLE GROUNDING SCALE: N.T.S.





NOTES:

LTE 4C - WC5/700 DE

- 1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
- OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
 CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB.
- 4. ALL GROUND LUGS MUST BE HEAT SHRUNK AT WIRE/LUG CONNECTION

GROUND BAR CONNECTION SCALE: N.T.S.

		WIRELESS S	OLUTIONS INC.
NO.	REQ.	PART NO.	DESCRIPTION
1	1	HLGB-0420-IS	SOLID GND. BAR (20"x4"x1/4")
2	2		WALL MTG. BRKT.
3	2		INSULATORS
4	4		5/8"-11x1" H.H.C.S.
(5)	4		5/8 LOCKWASHER

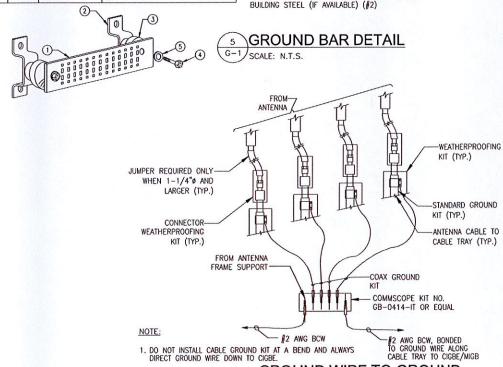
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

CABLE ENTRY PORTS (HATCH PLATES) (#2) GENERATOR FRAMEWORK (IF AVAILABLE) (#2) COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2) +24V POWER SUPPLY RETURN BAR (#2) -48V POWER SUPPLY RETURN BAR (#2)

SECTION "A" - SURGE ABSORBERS

INTERIOR GROUND RING (#2) EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2) METALLIC COLD WATER PIPE (IF AVAILABLE) (#2) BUILDING STEEL (IF AVAILABLE) (#2)



GROUND WIRE TO GROUND BAR CONNECTION DETAIL G-1 SCALE: N.T.S.



550 COCHITUATE ROAD, SUITES 13 & 14, FRANINGHAM, MA 01701-4681





Civil Engineering - Site Development Surveying - Telecommunications 500 NORTH BROADWAY EAST PROVIDENCE, RI 02914



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		DRAWING REVISIONS	
2	04/02/15		ME
1	03/06/15	REVISED DRAWING	ME
0	02/17/15	ISSUED FOR REVIEW	D
NO.	DATE	DESCRIPTION	8
		PROJECT INFORMATION	

SITE NUMBER: CT2583S-A FA NUMBER: 11571102

168 CENTER STREET SOUTHINGTON, CT 06489 HARTFORD COUNTY

DRAWN BY:	CHECKED BY:
DD	MRC
SHEET	TITLE

GROUNDING, DETAILS, RF PLUMBING DIAGRAM

> SHEET NUMBER REVISION #

G-1

ONE LINE RF DIAGRAM G-1 SCALE: N.T.S.

88822_18

RB822 18

SPLIT-SYSTEM AIR CONDITIONING NOTES:

QUALITY ASSURANCE

CONFIRM THAT UNITS WILL NOT INTERFERE WITH "QUIET ENJOYMENT" OF TENANT SPACES ADJACENT TO THE PROPOSED UNITS.

COMPLY WITH GOVERNING CODES AND REGULATIONS, PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS, USE EXPERIENCED INSTALLERS, DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE

COMPLIANCE: ARI 210.360: ASME CODE

WARRANTY: WARRANTY FOR HVAC COMPONENTS SHALL BEGIN WHEN THE UNIT IS DELIVERED.

MATERIALS

SPLIT SYSTEM UNITS: BY CARRIER-OUTFITTED PER AT&T SPECIFICATIONS.

COMPRESSORS: ALL COMPRESSORS USED IN THE HVAC UNITS SHALL BE SCROLL-TYPE COMPRESSORS AND SHALL BE SUITABLY EQUIPPED TO START UNDER LOW-AMBIENT TEMPERATURE CONDITIONS.

CONTRACTORS: CONTRACTORS SHALL BE HEAVY-DUTY DOUBLE POLE DEVICES, DESIGNED FOR HARD STARTS.

CONTROLS:

THE HVAC UNITS SHALL BE CONTROLLED BY A STANDARD LEAD-LAG CONTROLLER. THE HVAC UNITS AND THEIR CONTROLS SHALL BE CONFIGURED SUCH THAT NO CONDITION (INCLUDING FAILURE OF THE

LEAD-LAG CONTROLLER) WILL ALLOW MORE THAN ONE HVAC UNIT TO STAR THE SAME TIME. CONTROLS SHALL BE DESIGNED SUCH THAT ACTIVATION OF SMOKE DETECTOR SHALL SHUT DOWN THE ENTIRE HVAC SYSTEM.

STATUS MONITORING: THE SYSTEM SHALL PROVIDE INDICATION (NORMALLY-CLOSED CONTACTS WHICH OPEN ON ALARM CONDITION) THAT A GIVEN UNIT OR UNITS ARE INOPERATIVE

PROVIDE CONDENSATE PUMPS WITH LIQUID-TIGHT DRAIN PANS ON ALL SPUT-SYSTEM AIR HANDLERS. COMPLY WITH MANUFACTURERS RECOMMENDATIONS TO SIZE CONDENSATE PUMP BASE ON VERTICAL HEIGHT AND SITE SPECIFIC CONDITIONS. PUMPS:

DISCHARGE

THE SYSTEM SHALL INCLUDE SUITABLE PROTECTION FOR COMPRESSORS SUCH THAT NO COMPRESSOR CAN BE DAMAGED DUE TO HIGH-PRESSURE OR

LOW-PRESSURE REFRIGERANT CONDITIONS, LOSS OF REFRIGERANT, OR

INSULATION MATERIALS FOR PIPING:

FLEXIBLE ELASTOMERIC CELLULAR INSULATION: FLEXIBLE EXPANDED CLOSED-CELL STRUCTURE

TYPE WITH SMOOTH SKIN ON BOTH SIDES; TUBULAR MATERIALS, ASTM C 534, TYP 1; MATERIALS, ASTM C 534, TYPE II

FOR SERVICE AND

FIRE PERFORMANCE: VAPOR BARRIER:

TYPE SUITABLE FOR SERVICE. TYPE SUITABLE FOR SERVICE.

INSULATION ACCESSORIES INSULATION CEMENTS, ADHESIVE JACKETS TAPE, BANDS, WIRE, AND SEALING COMPOUNDS SUITABLE

INSTALLATION

PROTECTION:

SHEET

INSTALL MATERIAL AND SYSTEM IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND APPROVED SUBMITTALS, INSTALL MATERIALS IN PROPER RELATION WITH ADJACENT CONSTRUCTION AND WITH UNIFORM APPEARANCE FOR EXPOSED WORK, COORDINATE WITH WORK OF OTHER SECTIONS. COMPLY WITH APPLICABLE REGULATIONS AND CODE REQUIREMENTS. PROVIDE PROPER CLEARANCES FOR SERVICING.

SUPPORT PIPING PROPERLY, PITCH TO DRAIN POINTS, INSTALL WITH PIPE EXPANSION LOOPS,

MAINTAIN INDICATED FIRE RATINGS OF WALLS, PARTITIONS, CEILINGS AND FLOORS AT PENETRATIONS. SEAL WITH FIRESTOPPING TO MAINTAIN FIRE RATING.

INSTALL REFRIGERANT LINES ON SPLIT-SYSTEMS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, INSULATE LINES, FOR EXTERIOR APPLICATIONS, USE ULTRAVIOLET-RESISTENT INSULATION. USE PRESSURE-TREATED SLEEPERS TO SUPPORT LINES, A MAXIMUM OF 4 FEET ON CENTER ACROSS ROOFS AND FLAT SURFACES.

CHARGE THE HVAC SYSTEM, TEST FOR LEAKS, AND VERIFY THE UNIT IS FULLY OPERATIONAL. CLEARLY LABEL AND TAG ALL COMPONENTS. TEST AND BALANCE ALL SYSTEMS FOR PROPER OPERATION. REMOVE AND REPLACE UNITS WHICH DO NOT OPERATE PROPERLY AT NO ADDITIONAL EXPENSE TO COMPANY.

RESTORE DAMAGED FINISHES. CLEAN AND PROTECT WORK FROM DAMAGE.

SUBMITTALS

PRODUCT DATA: SUBMIT MANUFACTURER'S PRODUCT DATA AND INSTRUCTIONS FOR EACH MATERIAL AND INSTALLATION PRODUCT USED

OPERATION AND MAINTENANCE DATA: SUBMIT MANUFACTURER'S OPERATION AND MAINTENANCE DATA INCLUDING OPERATING INSTRUCTIONS LIST OF

SPARE PARTS AND MAINTENANCE SCHEDULE.

MECHANICAL NOTES:

- 1.DRAIN PANS SHALL BE CAPABLE OF SUPPORTING AIR-HANDLER UNITS (APPROX. 200# EACH). PANS SHALL SUPPORT CONDENSATE PUMP - PUMP TO BE MOUNTED PER MFGR. SPECIFICATIONS TO SUCCESSFULLY PUMP OUT DRAIN PAN THRU 3/4" CWT DISCHARGE WITH CHECK VALVE.
- 2. DRAIN PAN SHALL BE DETAILED BY SUBCONTRACTOR BUT SHALL MEASURE APPROXIMATELY 4'-0"X2'-6"X4" HIGH.
- 3.CONTRACTOR SHALL INSTALL 3/4" CWT DRAIN LINE FROM DRAIN CONNECTION OF EACH AIR HANDLER THROUGH A SEAL TRAP (W/PLUG) TO THE CONDENSATE PUMP.
- 4.INDIVIDUAL 3/4" CWT DISCHARGES FROM EACH CONDENSATE PUMP SHALL BE RUN (PITCHED DOWN) FROM EQUIPMENT ROOM IN A COMMON 1" CWT DRAIN LINE TO NEAREST BUILDING DRAIN OR OUTSIDE DRAINWAY. COORDINATE EXACT ROUTING WITH LL.
- 5.CONTRACTOR SHALL FURNISH/INSTALL (2) AIR HANDLERS WITH MINIMUM 18" ANGLE STEEL ELEVATED SUPPORT STRUCTURE INSIDE AT&T EQUIPMENT ROOM WALLS AS SHOWN — EXACT LOCATION TO BE FIELD DETERMINED WITH OWNER APPROVAL UNITS TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS INCLUDING CONDENSATE DRAINAGE OF NOTE (4).
- 6 CONTRACTOR SHALL INSTALL 22" X 10" SUPPLY DUCT WORK FROM AIR HANDLERS TOP DISCHARGE TO BRING IN CONDITIONED AIR THRU SUBCONTRACTOR SPECIFIED SUPPLY
 AIR REGISTER, EXACT LOCATIONS TO BE FIELD DETERMINED INCLUDING CONSIDERATION OF EQUIPMENT INSIDE AT&T EQUIPMENT ROOM, SUPPLY DUCT WORK TO BE A MINIMUM OF 20 GAUGE GALVANIZED AND SHALL BE INSULATED WITH A MINIMUM OF 1 1/2" THICK FIBERGLASS INSULATION. *AIR HANDLERS SHALL NOT HAVE ELECTRIC HEAT OR OTHER TYPE OF HEATING UNLESS STATED OTHERWISE BY OWNER, I.E. UNITS ARE FOR AIR CONDITIONING ONLY.
- 7.RETURN AIR SHALL BE INTRODUCED BACK TO THE AIR HANDLERS (BOTTOM ENTRANCE) THRU 24" X 24" DUCT WORK LOCATED APPROXIMATELY 12" ABOVE FLOOR ELBOWED UP INTO AIR HANDLER. EXACT LOCATION TO BE FIELD DETERMINED.
- 8.CONTRACTOR SHALL FURNISH/INSTALL CONDENSING UNITS, MATCHED TO EACH AIR HANDLER. UNITS SHALL BE MOUNTED ON PROP. CONCRETE FILLED SLEEPERS ON EXIST. ROOF. UNITS TO BE INSTALLED PER MANUFACTURER SPECIFICATIONS. SUBCONTRACTOR SHALL INSTALL LIQUID REFRIGERANT TUBING (SIZED PER MANUFACTURER'S REQUIREMENTS) FROM AIR HANDLERS TO CONDENSING UNITS -EXACT LOCATIONS INCLUDING REQUIRED WALL/CEILING PENETRATIONS (WITH PROPER SEALING) SHALL BE FIELD DETERMINED WITH OWNER APPROVAL. 1" THICK ARMAFLEX INSULATION SHALL BE INSTALLED ON LIQUID REFRIGERANT COOLING LINE.
- 9 CONTRACTOR SHALL INSTALL THERMOSTATS ROYES SMOKE DETECTORS TIME CLOCK AND ASSOCIATED TO CONTROL AIR HANDLER OPERATIONS IN MAINTAINING REQUIRED AT&T EQUIPMENT ROOM TEMPERATURE. ALL WORK OF UTILIZING STRAIGHT THRU, ONE-ON-ONE THERMOSTATS TO BE DONE ONLY WITH OWNER APPROVAL.
- 10. ALL A/C PIPING IN EQUIPMENT ROOM MUST BE INSULTED TO PREVENT SWEATING.
- 11. CONTRACTOR TO VERIFY ALL PIPING SIZE WITH MANUFACTURER PRIOR TO
- 12. SEE SHEET G-1 FOR SPLIT-SYSTEM GENERAL NOTES.

ARCOAIRE

48,000

208/230

ARCOAIRE N4A3

48,000

208/230

HARD START KIT

40 V.W. MANUF'R

MCMASTER-CARR

CP-1 & CP-2

N/A

120

*CONTRACTOR SHALL VERIFY BREAKER

SIZES WITH MANUFACTURER'S SPECIFICATIONS

V.W. MANUF'R

AIR HANDLER

MODEL:

MANUFACTURER:

COOLING (BTU/HR) NOMINAL TONS:

*CIRCUIT BREAKER:

CONDENSING UNIT

MANUFACTURER: MODEL:

NOMINAL TONS: ACCESSORIES:

VOLTAGE:

SYMBOL: VOLTAGE

COOLING (BTU/HR)

*CIRCUIT BREAKER:

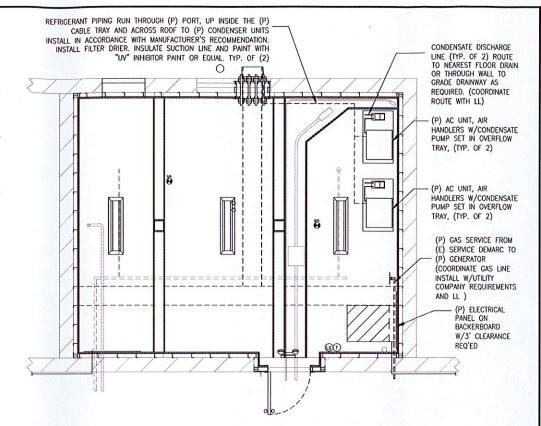
CONDENSATE PUMP

ACIRCUIT BREAKER-

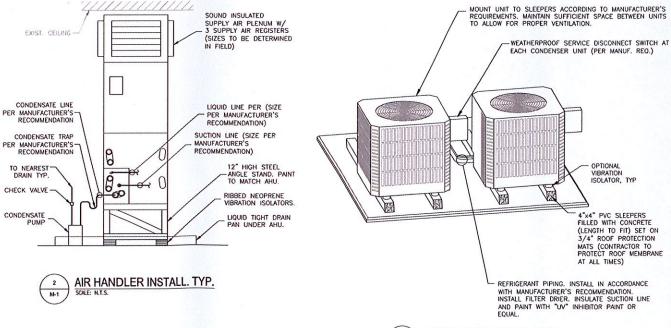
13.DUCTWORK TO BE CONSTRUCTED OF GALVANIZED SHEET METAL IN ACCORDANCE W/ "SMACNA" 2" PRESSURE CLASS.

CHECK VALVE

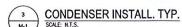
CONDENSATE







HALF SIZE PRINT THIS DRAWING IS SCALEABLE AT HALF THE NOTED SCALE





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168 CENTER STREET SOUTHINGTON, CT 06489 HARTFORD COUNTY

DRAWN BY:	CHECKED BY:
DD	MRC
 S	SHEET TITLE
 	

MECHANICAL PLAN

SHEET NUMBER

M-1

REVISION #